Sustainable Transportation & Land Use Integration Study

MAG Transit Committee

February 10, 2011
Study Update

• First Stakeholders Group meeting today at 2:00 pm
  • Study introduction
  • Perspectives on sustainable transportation
  • Regional transportation framework and issues
• Very much a learning process
• Arup North America, Ltd. – Mark Shorett
  • Sustainable Transportation: Two Case Study Examples
Sustainable Transportation
Two Words, Many Interpretations
Sustainable Transportation
Two Words, Many Levels of Implementation
Regional / State
Western Australia (Capital: Perth)

State Sustainability Strategy
Integrating Land Use and Balanced Transport Policy

Vision
“Transport and land use decisions are so interconnected and synergistic that a more balanced, less car dependent city rapidly emerges and solves multiple urban sustainability problems.”

Objectives
1. Increase residential, employment, retail, community and entertainment activity around key transport nodes and in major centres.
2. Achieve a balance between car use and other transport options through promotion and provision of efficient and effective public transport and non-motorised personal transport alternatives

Actions (sample)
Encourage local government to provide for flexibility in residential zoning, which allows small business and ‘corner shop’ retail facilities to locate in existing suburban communities.
Case Study: Denver Metro Area

- Multiple agencies supporting a common vision
  - DRCOG
  - RTD-FasTracks
  - Cities
- **1997:** MetroVision 2020
- **2000:** Mile High Compact
- **2007:** MetroVision 2035
Denver Metro Area: Investments

- **Light rail** (1994-)
  - Five lines completed
  - Planned 117-mile expansion adopted in 2004
  - Seven lines to be completed in next 7 years

- **Bus**
  - Free downtown shuttle and circulator
  - 5 All-day limited and 1 BRT line (additional lines planned)

- **Non-Motorized**
  - Extensive on and off-street bicycle network
  - Pedestrian-friendly TOD
Denver Metro Area: Integrated Corridor Planning

- Vision
- Goals/Objectives
- Environmental Scan
- Land Use Integration
- Capital Projects
  - Transit
  - Pedestrian/Bike
- System Management
- TDM
## Denver Metro Area: Mobility

- **1982-2000**: Per capita VMT on freeways and arterials increases 28%

- **2000-2009**: Mobility performance improves

<table>
<thead>
<tr>
<th>Year</th>
<th>Daily Per Capita VMT (Freeways + Arterials)</th>
<th>% Change Daily Per Capita VMT</th>
<th>Annual Per Capita Transit Trips</th>
<th>% Change Annual Per Capita Transit Trips</th>
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</thead>
<tbody>
<tr>
<td>2000</td>
<td>19.42</td>
<td>-6%</td>
<td>40.52</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>18.28</td>
<td></td>
<td>43.13</td>
<td>+6%</td>
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(Texas Transportation Institute 2010 Urban Mobility Report)
Denver Metro Area: TOD

Residential Development

Exhibit 3-2: Residential TOD by Delivery Year

1997: Metro Vision adopted
2005: Tax measure approved to fund expansion

(RTD 2010 TOD Update)
Denver Metro Area: TOD
Office Development

1997: Metro Vision adopted
2005: Tax measure approved to fund expansion

(RTD 2010 TOD Update)
Case Study: Perth, Australia

- Highest car ownership among Australian cities
- New rail investments combined with system overhaul
- Coordinated Land Use Planning:
  - Metropolitan Region Scheme
  - Network City Plan
- Consumer-driven approach
Perth, Australia: Investments

- Railways overhauled in 1990s
- System additions combined with changes to strategy and service
- Integrated with regional land uses:
  - Create walk-on patronage TOD areas (eg. Subi Centro) with walkability for car-free trips
  - Have fewer stations for speed over larger distances
  - Accommodation at rail stations for easy bus transfers and multi-modal trips.
Perth, Australia: Transit System Impact

- **Rail ridership** grew from 8 million to 47 million riders per year (1991 to 2006)
- **Subi Centro Station Area:** $130m AUD state investment spurred $500m private sector investment
Perth, Australia: TravelSmart

- **Consumer-Driven Approach:** Outreach, information tailored to targeted areas and households

- **Surprising Results:** Individuals express greater interest than expected in sustainable modes

- **Effective:** 20%-30% percent increase in bike/walk travel (from a low base) and a 9%-14% percent decrease in auto travel

- **Economic Impacts:** cost-benefit ratio of 13 to 1 - much higher than what is usually estimated for transport infrastructure investments
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QUESTIONS?